

Table 1

	Example					Comparative Example	
	Example 1	Example 2	Example 3	Example 4	Example 5	Comparative Example 1	Comparative Example 2
(1) Polyolefin resin (C)							
Crystalline polypropylene (A) content	83.5	76.9	67	52	80	100	80
Propylene content in crystalline polypropylene (A)	100	100	100	100	100	100	100
Copolymer (B) content	16.5	23.1	33	48	20	0	20
Propylene content in copolymer (B)	64	60	60	64	27	0	50
MFR _{WHOLE} of polyolefin resin (C)	2.8	3.4	0.5	0.4	5.5	2	9.4
MFR _{PP} of crystalline polypropylene (A)	3.2	5	0.5	0.4	9.2	2	22
MFR ratio (MFR _{PP} /MFR _{RC})	2	5	1	1	13.1	—	75
(2) Processing conditions							
[Film forming step]							
Extrusion temperature	280	280	280	280	280	280	280
Lip clearance	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Linear velocity at the lip	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Roller temperature	80	80	80	80	80	80	80
Film forming rate	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Draft ratio	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Film thickness	200	200	200	200	200	200	200
[Stretching step]							
Direction of 1st stretching	TD	TD	TD	TD	TD	TD	TD
Transversal stretching ratio	3	3	3	3	2.5	3	Not stretchable
Transversal stretching temperature	23	23	23	23	23	23	Not stretchable
Longitudinal stretching ratio	3	3	3	3	3	3	Not stretchable
Longitudinal stretching temperature	100	100	100	100	100	100	Not stretchable
(3) Stretching characteristics of film							
Maximum stretching ratio, longitudinal (MD)	3.5	4.0	5.0	6.0	2.5	4.0	Not stretchable
Maximum stretching ratio, transversal (TD)	3.5	4.0	5.0	6.0	2.5	4.0	Not stretchable
(4) Characteristics of porous membrane							
Thickness	25	27	34	44	30	22	Not stretchable
Porosity	12	18	34	50	10	0	Not stretchable
Maximum pore diameter	5	6	5	5	6	Not measurable	Not stretchable
Moisture permeability	550	700	2100	3200	640	10	Not stretchable
Air resistance (Gurley)	1500	900	120	30	1800	Not measurable	Not stretchable

Note: "Not measurable" means lack of permeability due to absence of continuous pores.

Table 2

	Example					Comparative Example	
	Example 6	Example 7	Example 8	Example 9	Example 10	Comparative Example 4	Comparative Example 5
(1) Polyolefin resin (C)							
Crystalline polypropylene (A) content	52	52	52	52	52	52	52
Propylene content in crystalline polypropylene (A)	100	100	100	100	100	100	100
Copolymer (B) content	48	48	48	48	48	48	48
Propylene content in copolymer (B)	64	64	64	64	64	64	64
MFR _{WHOLE} of polyolefin resin (C)	0.4	0.4	0.4	0.4	0.4	0.4	0.4
MFR _{pp} of crystalline polypropylene (A)	0.4	0.4	0.4	0.4	0.4	0.4	0
MFR ratio (MFR _{pp} /MFR _{RC})	1	1	1	1	1	1	1
(2) Processing conditions							
[Film forming step]							
Extrusion temperature	280	280	280	280	280	280	280
Lip clearance	0.6	1.2	0.2	0.2	0.2	2	0.2
Linear velocity at the lip	1.0	0.5	3.1	3.1	3.1	0.3	3.1
Roller temperature	80	80	80	80	80	80	80
Film forming rate	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Draft ratio	3.6	7.2	1.2	1.2	1.2	12	1.2
Film thickness	200	200	200	200	200	200	200
[Stretching step]							
Direction of 1st stretching	TD	TD	TD	TD	TD	TD	TD
Transversal stretching ratio	3	3	5	3	3	3	3
Transversal stretching temperature	23	23	23	80	23	23	120
Longitudinal stretching ratio	3	3	6	3	1	3	3
Longitudinal stretching temperature	100	100	100	100	—	100	100
(3) Stretching characteristics of film							
Maximum stretching ratio, longitudinal (MD)	4.0	3.0	6.0	6.0	6.0	2.5	6.0
Maximum stretching ratio, transversal (TD)	5.0	4.0	6.0	6.0	6.0	3.0	6.0
(4) Characteristics of porous membrane							
Thickness	36	28	19	33	93	23	22
Porosity	38	21	65	32	28	5	0
Maximum pore diameter	5	6	7	5	4	4	—
Moisture permeability	1800	640	7200	2000	1500	20	20
Air resistance (Gurley)	300	1200	8	120	180	Not measurable	Not measurable

Table 3

	Example				
	Example 11	Example 12	Example 13	Example 14	Example 15
(1) Polyolefin resin (C)					
Crystalline polypropylene (A) content	68	58	60	40	40
Propylene content in crystalline polypropylene (A)	100	100	100	100	100
Copolymer (B) content	32	42	40	60	60
Propylene content in copolymer (B)	60	60	60	60	35
MFR _{whole} of polyolefin resin (C)	11.5	14.5	11.8	4.1	4.2
MFR _{pp} of crystalline polypropylene (A)	50	100	100	100	100
MFR ratio (MFR _{pp} /MFR _{RC})	99	99	210	205	197
(2) Processing conditions					
[Film forming step]					
Extrusion temperature	280	280	280	280	280
Lip clearance	0.4	0.4	0.4	0.4	0.4
Linear velocity at the lip	1.5	1.5	1.5	1.5	1.5
Roller temperature	80	80	80	80	80
Film forming rate	3.7	3.7	3.7	3.7	3.7
Draft ratio	2.4	2.4	2.4	2.4	2.4
Film thickness	200	200	200	200	200
[Stretching step]					
Direction of 1st stretching	TD	TD	TD	TD	TD
Transversal stretching ratio	2.5	3	3	3	2.5
Transversal stretching temperature	23	23	23	23	23
Longitudinal stretching ratio	3	3	3	3	2.5
Longitudinal stretching temperature	80	80	80	80	80
(3) Stretching characteristics of film					
Maximum stretching ratio, longitudinal (MD)	2.5	3.5	3.0	3.0	2.5
Maximum stretching ratio, transversal (TD)	3.0	4.0	3.5	3.5	2.5
(4) Characteristics of porous membrane					
Thickness	49	40	46	48	59
Porosity	46	44	52	54	46
Maximum pore diameter	10	11	9	8	17
Moisture permeability	500	2,800	640	1,860	400
Air resistance (Gurley)	2,400	640	1,170	720	3,200

Table 4

	Example				Comparative Example	
	Example 16	Example 17	Example 18	Example 19	Comparative Example 6	Comparative Example 7
(1) Polyolefin resin (C) Crystalline polypropylene (A) content wt% Propylene content in crystalline polypropylene (A) wt% Copolymer (B) content wt% Propylene content in copolymer (B) wt% MFR _{WHOLE} of polyolefin resin (C) g/10 min MFR _{PP} of crystalline polypropylene (A) g/10 min MFR ratio (MFR _{PP} /MFR _{RC})	58 100 42 60 14.5 100 99	58 100 42 60 14.5 100 99	58 100 42 60 14.5 100 99	58 100 42 60 14.5 100 99	58 100 42 60 14.5 100 99	58 100 42 60 14.5 100 99
(2) Processing conditions [Film forming step] Extrusion temperature °C Lip clearance mm Linear velocity at the lip m/min Roller temperature °C Film forming rate m/min Draft ratio Film thickness μm [Stretching step] Direction of 1st stretching Transversal stretching ratio Transversal stretching temperature °C Longitudinal stretching ratio Longitudinal stretching temperature °C	280 0.2 3.1 80 3.7 1.2 200 TD 3 23 3 80	280 1.2 0.5 80 3.7 7.2 200 TD 3 23 3 80	280 0.4 1.5 80 3.7 2.4 200 TD 3 23 1 80	280 0.4 1.5 90 3.7 2.4 200 MD 3 80 3 23	280 2 0.3 80 3.7 12 200 TD 3 23 3 80	280 0.4 1.5 30 3.7 2.4 200 TD 2.5 120 2.5 80
(3) Stretching characteristics of film Maximum stretching ratio, longitudinal (MD) Maximum stretching ratio, transversal (TD)	4.0 4.0	3.0 4.0	3.0 3.5	3.0 3.5	3.0 3.5	2.0 2.5
(4) Characteristics of porous membrane Thickness μm Porosity % Maximum pore diameter μm Moisture permeability g/m ² /24 h Air resistance (Gurley) s/100 mL	44 50 11 3,200 520	38 41 12 820 2,200	103 35 7 460 4,200	38 42 11 1,900 920	28 21 — Not measurable Not measurable	36 12 — Not measurable Not measurable